U.S. Department of the Interior
Bureau of Land Management
Kremmling Field Office
P.O. Box 68
Kremmling, CO 80459

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-120-2008-44-EA

PROJECT NAME: Antelope Creek Fish Structures

LEGAL DESCRIPTION: T. 3 N. R. 80 W. Sec. 8, 6th P.M., Grand County, Colorado

APPLICANT: BLM

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Background: Antelope Creek is a perennial stream within the Kremmling Field Office (KFO) with a water land use priority for water quality protection and restoration. The project area is not located within a BLM grazing allotment and standards for land health have not been evaluated for this area.

In 2006, a riparian exclosure was built to keep cows that are grazing State lands from trespassing onto BLM-administered public lands and degrading the riparian habitat adjacent to Antelope Creek. Since that time, vegetation within the exclosure has improved.

Antelope Creek contains a pure population of Greenback Cutthroat trout, a federally threatened species. The population is confined to the upper reaches of the watershed above major irrigation diversion structures on United States Forest Service (USFS), State lands, and private. The fish cannot utilize the BLM stream segment due to upstream seasonal water diversions which reduce flows sufficient to hold and sustain fish populations.

Proposed Action: The project would consist of constructing up to 20 in-channel structures intended to create scour and thus result in the creation of limited pool habitat (see location and image maps below). In the fall of 2008, 10 structures would be constructed. The structures would be built out of rocks. Additional details are provided below.

The proposed stream segment goes from a "B" to a "C" channel type based on Rosgen 1996 stream classification as you go downstream. Based on these stream types, the best structures to create pool habitat would be small "J-Hooks" anchored into the bank that deflect flow to the center of the channel and create scour and a pool below the structure.

Structure construction would consist of digging a small trench into the stream channel and bank. A set of footer rocks would be buried in the stream bed and into the bank with a similar sized habitat rock placed on top of the footer rock. The habitat rocks would be placed at just below bank full flow elevation and removed fill would be placed back around the rocks to secure them (see Appendices #2 for J-Hook diagram). Approximately 19-23 rocks would be used per structure. Rocks would come from onsite or hauled in from an offsite source nearby, if needed. No more than 0.1 acres of disturbance would occur. It is likely that some riparian vegetation could be disturbed and lost due to excavation of small portions of the bank. It is estimated that no more than 10 willows and approximately 50-square-feet of sedges would be disturbed.

A one square foot rock is equal to approximately 0.04-cubic yards of fill. It is estimated that a total of up to 400 rocks of 6-10 inch size would be used in construction resulting in the placement of up to 4.4-cubic yards of fill into the stream, using an 8-inch average size. All excavated material would be placed back on site around the rock structures to secure them. The project should not result in any dredged material. Before any in-stream construction could begin, a 404 permit would be needed from the United States Army Corps of Engineers.

It is anticipated that construction would take up to 2-days to complete. All work would be done during daylight hours during low flow conditions in October 2008. Work would be performed by KFO staff using hand tools (shovels, Pulaski's, etc.) during scheduled "office work days". Staff would be briefed on the project and the construction would be assisted and overseen by the Fisheries Biologist, Hydrologist, and Wildlife Biologist

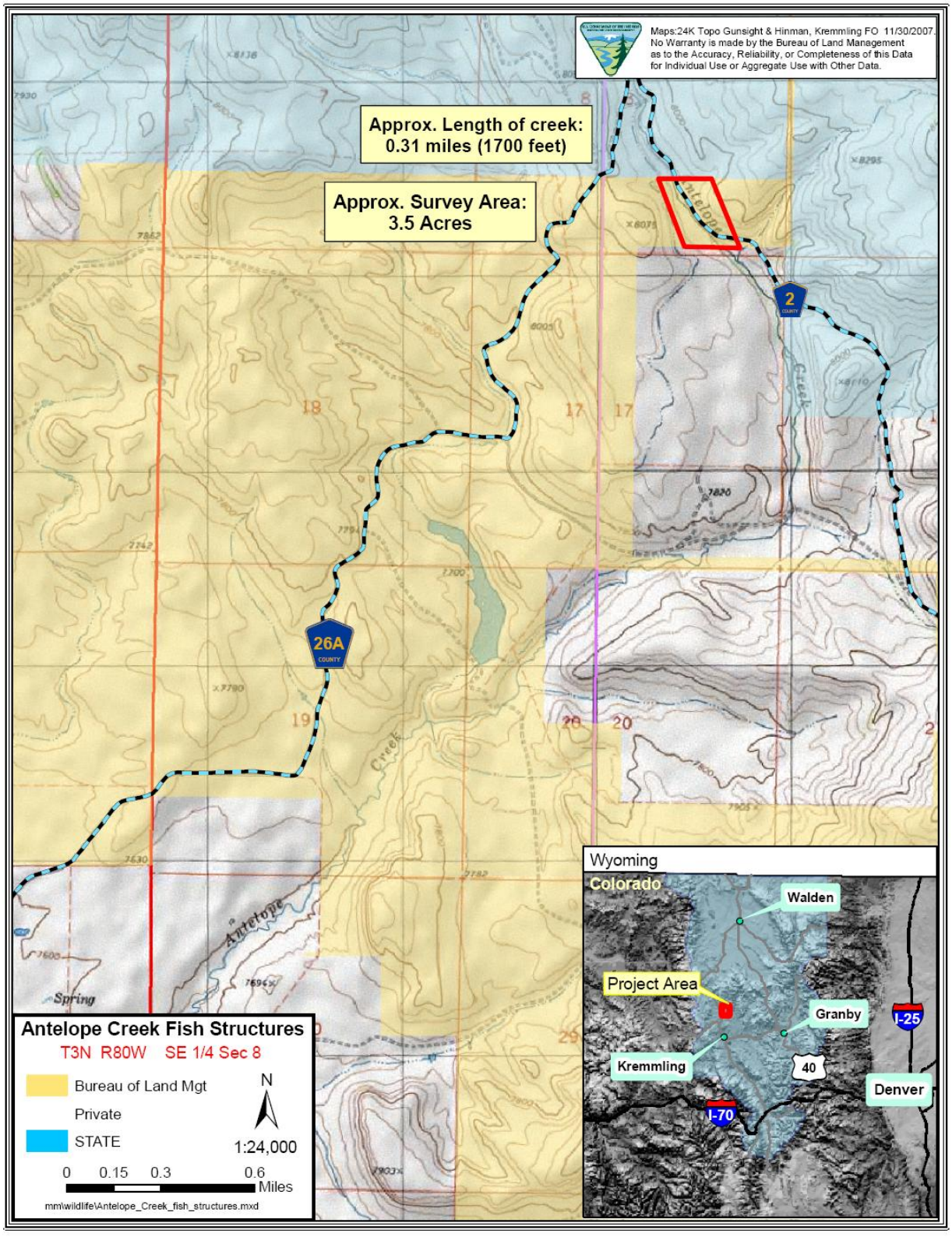
Design Features of the Proposed Action:

- To mitigate impacts to riparian vegetation, 5-gallon willow plants native to the site would be planted at a 3:1 ratio (3 planted willows for every one willow impacted). Depending on the time of the project, planting willows in the fall may not provide them with enough time to get established and survive over the winter. In this case, planting would occur in the spring utilizing on-site willow slips.

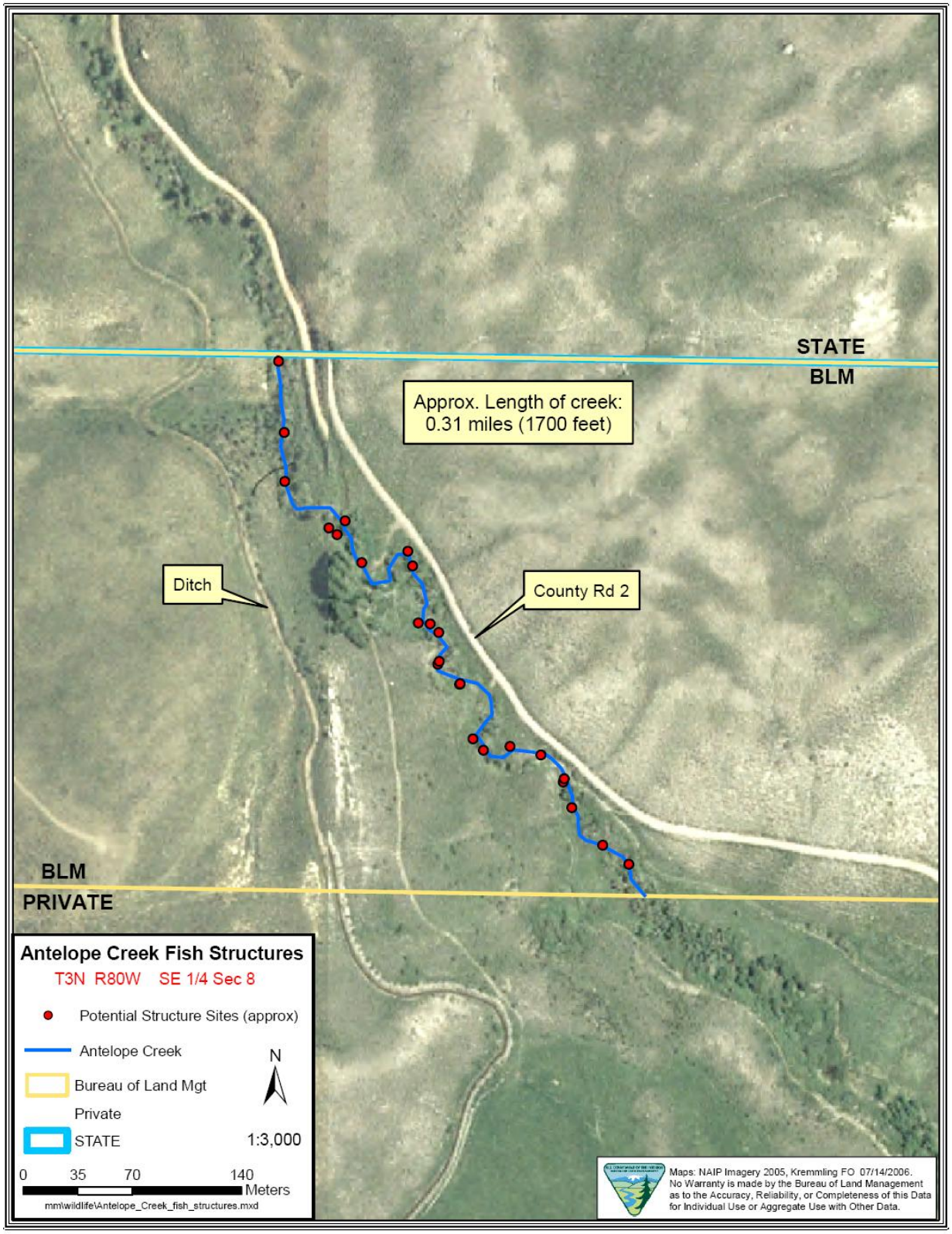
- "C" channel types tend to erode around rigid structures and cause structure and bank failures. If the substrate is finer than a cobble, then a filter cloth would be placed in the trench to help prevent erosion and/or settling of the structure. The structures are not recommended in channels with gravel to sand bank material.

No Action Alternative: Implementation of the No Action Alternative would mean the Antelope Creek fish structures would not be installed. However, habitat for fish within this stream segement would continue to improve (although at a much slower pace) due to the riparian exclosure.

Project location map:



Project image map:



PURPOSE AND NEED FOR THE ACTION: The purpose of the project would be to create much needed pool habitat that could potentially, even during low flows, harbor and sustain fish populations through the irrigation season.

There is a need to consider the project because the BLM stream segment is severely dewatered most years due to seasonal irrigation diversions located upstream. As such, fish use of the BLM stream segment does not occur due to a lack of holding (pool) habitat. The project could also expand the range of a threatened fish species and result in an increase in occupied stream miles.

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: Kremmling Resource Management Plan (RMP), Record of Decision (ROD)

Date Approved: December 19, 1984; Updated February 1999

Decision Number/Page: Decision 5.a., page 8

Decision Language: Manage public land habitat to support optimum wildlife population levels as determined by the Colorado Division of Wildlife's Strategic Plan. Emphasis will be placed on intensively managing critical and important habitats including 326,000 acres of uplands, 3 miles of riparian, 3,000 acres of wetlands, and 53 miles of stream. All threatened and endangered plant and wildlife habitats will be protected as required by law and regulation.

Standards for Public Land Health: In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. The following are the approved standards:

Standard	Definition/Statement
#1 Upland Soils	Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geologic processes. Adequate soil infiltration and permeability allows for the accumulation of soil moisture necessary for optimal plant growth and vigor, and minimizes surface runoff.
#2 Riparian Systems	Riparian systems associated with both running and standing water, function properly and have the ability to recover from major surface disturbances such as fire, severe grazing, or 100-year floods. Riparian vegetation captures sediment, and provides forage, habitat and bio-diversity. Water quality is improved or maintained. Stable soils store and release water slowly.
#3 Plant and Animal Communities	Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat's potential. Plants and animals at both the community and population level are productive, resilient, diverse, vigorous, and able to reproduce and sustain natural fluctuations, and ecological processes.
#4 Threatened and Endangered Species	Special status, threatened and endangered species (federal and state), and other plants and animals officially designated by the BLM, and their habitats are maintained or enhanced by sustaining healthy, native plant and animal communities.
#5 Water Quality	The water quality of all water bodies, including ground water where applicable, located on or

	influenced by BLM lands will achieve or exceed the Water Quality Standards established by the State of Colorado. Water Quality Standards for surface and ground waters include the designated beneficial uses, numeric criteria, narrative criteria, and anti-degradation requirements set forth under State law as found in (5 CCR 1002-8), as required by Section 303(c) of the Clean Water Act.

Because a standard exists for these five categories, a finding must be made for each of them in the environmental analysis. These findings are located in specific elements below or in the Interdisciplinary Team Analysis Review Record and Checklist (IDT-RRC) (Appendix 1).

AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES:

CRITICAL ELEMENTS: The following critical elements: Air Quality, Areas of Critical Environmental Concern, Cultural Resources, Environmental Justice, Farmlands- Prime and Unique, Floodplains, Native American Religious Concerns, Wastes- Hazardous or Solid, Water Quality, Wetland and Riparian Zones, Wild and Scenic Rivers, and Wilderness were evaluated and determined that they were not present or that there would be no impact to them from the Proposed Action or No Action Alternative. See IDT-RRC in Appendix 1 for further information.

The following critical elements were determined to be potentially impacted and were carried forward for analysis from the IDT-RRC in Appendix 1.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: Currently, invasive, non-native species (noxious weeds) are not a problem within the project area. Small patches of Canada thistle (*Cirsium arvense*) inhabit the riparian area along Antelope Creek. Other weeds that may be present in the project area are minor and have begun to diminish since the removal of livestock grazing and recovery of the native vegetation.

Environmental Consequences: Any soil disturbing activity increases the chance of noxious weed establishment and spread. However, the minor amount of disturbance and planned vegetation reclamation associated with the Proposed Action would result in no increase in the amount or kind of noxious weeds located in the project area. Under the No Action Alternative, noxious weeds in the project area would continue to diminish due to the removal of livestock grazing and continued recovery of native vegetation.

No cumulative or irreversible impacts would be expected to occur as a result of the Proposed Action and No Action Alternative.

MIGRATORY BIRDS

Affected Environment: The proposed project would occur in habitat occupied by a variety of migratory birds including Yellow Warbler, Western Wood-Pewee, Broad-tailed Hummingbird, Dusky Flycatcher, Hermit Thrush, Veery, Violet-green Swallow, and Warbling Vireo. Red-tailed hawks, Great-horned Owls, and Swainson's hawks also use the riparian area adjacent to Antelope Creek as hunting habitat.

Environmental Consequences: Direct impacts would include temporary displacement of birds during construction activities. Indirect impacts would include improved riparian habitat conditions (i.e. increased fish population) which could benefit migratory birds.

If the No Action Alternative is implemented, the habitat adjoining Antelope Creek would not improve to the extent possible with the Proposed Action.

No cumulative or irreversible impacts would be expected to occur as a result of the Proposed Action and No Action Alternative.

THREATENED, ENDANGERED, AND SENSITIVE SPECIES (includes a finding on Standard 4)

Affected Environment: A list of threatened, endangered and candidate species that could inhabit the proposed project area was received from the U.S. Fish and Wildlife Service on March 31, 2008.

Greenback Cutthroat trout, a federally threatened species, are found approximately 5-miles upstream of the project area where flows are adequate to support fish. Like most members of the trout family, Greenback Cutthroat trout require clear, cold water, naturally-fluctuating flows, low levels of fine sediment in channel bottoms, well-distributed pools, stable stream banks, and abundant stream cover. The low flows (and sometimes no flow) associated with Antelope Creek in the proposed project area have prevented fish from inhabiting the BLM-administered public land stream segment. The total length of Antelope Creek on BLM-administered public land in the project area is approximately 0.31 miles.

The Northern Leopard frog, a BLM sensitive species, is known to occupy Antelope Creek. The Northern Leopard frog was observed in the project area in September 2005 and July 2008. These frogs generally require a permanent water source such as springs, streams, ponds, canals, or lakes with rooted aquatic vegetation. During the summer, the Northern Leopard frog commonly inhabits wet meadows and fields. Metamorphosed frogs eat various small invertebrates obtained along water's edge or in nearby meadows or fields and larvae eat algae, plant tissue, organic debris, and some small invertebrates.

Environmental Consequences: Implementation of the Proposed Action would be beneficial to Northern Leopard frogs and Greenback Cutthroat trout since pool habitat would potentially increase, thus improving their over-all aquatic habitat. The Proposed Action would also allow the riparian vegetation to improve thereby providing better habitat and increase food supply (i.e. increased insect production) for the trout and frogs. There would be a potential cumulative beneficial impact to the aquatic habitat when added to the past action of the riparian exclosure.

If the No Action Alternative is implemented, the habitat in and adjoining Antelope Creek would not improve to the extent possible with the Proposed Action. The Greenback Cutthroat trout would continue to stay upstream and the Northern Leopard frogs would continue to occupy the habitat. No cumulative or irreversible impacts would be expected to occur as a result of the No Action Alternative.

Finding on the Public Land Health Standard for Threatened & Endangered species: There has not been any land health assessments conducted in the proposed project area. However, the proposed project would not prevent the area from meeting this standard.

NON-CRITICAL ELEMENTS: The following non-critical elements were determined to be potentially impacted and were carried forward for analysis from the IDT-RRC in Appendix 1.

VEGETATION (includes a finding on Standard 3)

Affected Environment: The current vegetation community consists of a good mixture of grasses, shrubs, forbs, and trees. The grasses within the riparian area are mostly Kentucky bluegrass (*Poa pretensis*), and timothy (*Phleum pretense*) that have adopted a low growth form to compensate for the livestock grazing pressure of the past. Nebraska sedge, a desirable riparian species, occupies some of the area along Antelope Creek. The vegetation has improved since the construction of the riparian area exclosure fence in 2006.

Trees occupying the riparian area included narrow leaf cottonwood (*Populus angustifolia*), aspen (*Populus tremuloides*), and thin leaf alder (*Alnus tenuifolia*). Shrubs are numerous and varied with species including currant (*Ribes* spp), chokecherry (*Prunus virginiana*), Wood's rose (*Rosa woodsii*), big sagebrush (*Artemisia tridentata*), silver sage (*Artemisia cana*), and rabbitbrush (*Chrysothamnus* spp). Forbes found in the Antelope Creek riparian are numerous and varied. Species present in any particular year depend highly on recent precipitation and other climatic factors. Some Canada thistle has become established along Antelope Creek.

Environmental Consequences: The proposed project would be confined mostly to Antelope Creek itself. The Proposed Action would create a minor amount of disturbance to the vegetation along Antelope Creek. With the proposed reclamation and the current good health of the vegetation, any disturbances should quickly recover following completion of the project. There would be a potential cumulative beneficial impact to the riparian vegetative recovery when added to the past action of the riparian exclosure.

Under the No Action Alternative, there would be no impacts to riparian vegetation. Vegetation would continue to improve as a result of the riparian exclosure. No cumulative or irreversible impacts would be expected to occur as a result of the No Action Alternative.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): The proposed project area is not included in a livestock grazing allotment and therefore, has not been assessed for compliance with the Standards for Public Land Health in Colorado. However, the proposed project would not prevent the area from meeting this standard.

WILDLIFE, AQUATIC (includes a finding on Standard 3)

Affected Environment: Antelope Creek provides habitat for Colorado Cutthroat trout and Northern Leopard Frogs (see the Threatened, Endangered, and sensitive species section).

Environmental Consequences: The Proposed Action would improve aquatic habitat in Antelope Creek. The project, if authorized and implemented, would create much needed pool habitat that could potentially harbor and sustain fish through the irrigation season. This would expand the range of fish and result in an increase in occupied stream miles. It would also likely

result in increased numbers of fish in the stream. Additional pool habitat would also increase insect production that would be utilized by fish and frogs for cover and food.

If the No Action Alternative is implemented, the habitat in and adjoining Antelope Creek would not improve to extent possible under the Proposed Action (i.e. riparian vegetation would continue to improve as a result of the riparian exclosure).

No cumulative or irreversible impacts would be expected to occur as a result of the Proposed Action and No Action Alternative.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): There has not been any land health assessments conducted in the proposed project area. However, the proposed project would not prevent the area from meeting this standard.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: The proposed project would be constructed in an area used by a variety of terrestrial wildlife including mule deer, Rocky Mountain elk, pronghorn, black bear and a variety of small mammals. The project would be located in riparian vegetation which is used as foraging habitat for those species listed above.

Environmental Consequences: Direct impacts would include temporary displacement of wildlife during construction activities. No cumulative or irreversible impacts would be expected to occur as a result of the Proposed Action and No Action Alternative.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): No analysis has been conducted in the proposed project area. However, the proposed project would not prevent the area from meeting this standard.

HYDROLOGY AND WATER RIGHTS

Affected Environment: The project area is located on the BLM's upper most segment of Antelope Creek. The BLM has three segments of Antelope Creek, with the upper two each having approximately a third of a mile of stream, and the lowest segment being about 1.7 miles of stream. Antelope Creek is a small perennial stream, which by BLM estimates, has more than 80% of its flow diverted for irrigation. The flow is supplemented by water from Troublesome Creek that is stored in Matheson Reservoir. The Antelope Creek No. 2 Ditch is the main diversion directly upstream of the project area. The ditch has a 1906 adjudication date, and is decreed for 6 cubic-feet-per-seconds (cfs). In the last 34 years, the ditch has been able to divert between 3-8 cfs for an average diversion of 557 acre-feet (af). Although occasionally the ditch is turned on in April, most years the ditch runs from May-July. Approximately 50% of the years (1906-present) had diversions in August and September, and for 11 years into October. The headgate was recently replaced and the newer headgate is able to divert 100% of the streamflow. Minimal ditch seepage returns to the creek within the project area.

There are private ponds that have been constructed upstream of the BLM segment on tributary drainages. Although the ponds do not have water rights, and the BLM has objected to the ponds, it is unknown at this time if the ponds would continue to fill, and how their existence would affect flows in Antelope Creek. Matheson Reservoir No. 2 has a conditional water right upstream of the project for 475.8 af of storage. The water right last came up for diligence review in 2004 and the owner has shown diligence to developing his water right. In 1986, the Colorado Water Conservation Board (CWCB) obtained an instream flow on the stream for 1.5 cfs, but due to its lack of seniority, the amount is rarely available.

The BLM has monitored Antelope Creek since 1979. However, the primary monitoring location is in the lowest segment where the stream leaves the BLM. Water flows and quality do not necessarily reflect the project site, as the downstream segment receives irrigation return flows and is much narrower with over hanging banks. Earlier monitoring of the upper section in 1979 recorded an "average fishery", with limiting factors assessed as sediment and lack of food. The riparian area was in "improving condition", with a stream width of 8-feet and a maximum depth of 0.6 feet. The stream section was 10% rough fish and 90% game fish. Cutthroat trout between 3-10 inches, sculpin, and chubs were found. Stream flows in 1980 had a early June flow of 4.3 cfs and a late summer flow of 0.6 cfs. The headgate for the Antelope Ditch No. 2 was located within the BLM stream segment at that time, so measurements appear to record the streamflow above the ditch.

During a June 2008 field trip, two stream cross sections were measured. The stream widths were 3.8-4.4 feet, and water depth was 0.2-0.3 feet. Evidence of spring runoff high flows was observed. In the upper section where the stream is confined by upper banks, the bankfull width was measured at 9.6 feet, while the lower section near the exclosure gate was 30.7 feet. Channel slope ranged from 2.4% to 0.87%. In mid July, Antelope #2 Ditch was shut off to allow for irrigated meadows to dry out prior to haying. The lower stream section showed 0.2 cfs in the channel. In addition, fish shocking occurred within the stream in July 2008, and only a sand shiner was flushed out of the existing natural pools created by woody debris in the stream.

Environmental Consequences: The actual amount of pooling the structures would create is uncertain. Due to the operation of the upstream ditch, the amount and duration of high flows may not be sufficient to flush the structures of accumulated sediments. It is also unknown if the flows would be sufficient for the pools to support aquatic life throughout the year. Generally some runoff would occur prior to many irrigation ditches diverting water. This high flow may be sufficient to create a pool behind the structure, and to occasionally flush accumulated sediment. As long as some flow remains to freshen the pools, this could be sufficient.

A "J-Hook" structure is designed to create fish habitat and take some flow velocity off of the channel bank. The proposed project may provide additional habitat and should not hinder the operation of private irrigation ditches. No major pond volume or increased surface evaporation would be created that could affect downstream water rights.

Under the No Action Alternative, the riparian zone would continue to recover, and in time, additional pools might be created from new woody debris in the channel.

No cumulative or irreversible impacts would be expected to occur as a result of the Proposed Action and No Action Alternative.

CUMULATIVE IMPACTS SUMMARY: As stated in the previous sections, there would be potential cumulative beneficial impact to the aquatic habitat when added to the past action of the riparian exclosure.

PERSONS / AGENCIES CONSULTED: Colorado Division of Wildlife

INTERDISCIPLINARY REVIEW: See IDT-RRC in Appendix 1.

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Based on the analysis of potential environmental impacts contained in the attached environmental assessment, and considering the significance criteria in 40 CFR 1508.27, I have determined that the Proposed Action will not have a significant effect on the human environment. An environmental impact statement is therefore not required.

DECISION RECORD

DECISION: It is my decision to authorize the Proposed Action as described in the attached EA.

RATIONALE: The Proposed Action will further improve the aquatic habitat and potentially expand the range of Greenback Cutthroat trout in Antelope Creek.

NAME OF PREPARER: Megan McGuire

NAME OF ENVIRONMENTAL COORDINATOR: Joe Stout

DATE: 9/11/08

SIGNATURE OF AUTHORIZED OFFICIAL /s/ David Stout

DATE SIGNED: 9/24/08

APPENDICES:

Appendix 1 – Interdisciplinary Team Analysis Review Record and Checklist
Appendix 2 – J Hook Diagram

Appendix 1

INTERDISCIPLINARY TEAM ANALYSIS REVIEW RECORD AND CHECKLIST:

Project Title: Antelope Creek Fish Structures
Project Leader: Megan McGuire

Consultation/Permit Requirements:

Consultation	Date Initiated	Date Completed	Responsible Specialist/ Contractor	Comments
Cultural/Archeological Clearance/SHPO	7/14/08	7/15/08	BBW	The survey was completed and no new or previously recorded sites lie within the project area.
Native American	3/12/08	7/14/08	BBW	To date no Native American Tribe has identified any area of traditional concern.
T&E Species/FWS	N/A	N/A	MM	
Permits Needed (i.e. Air or Water)	07/09/08		PB	A 404 Nationwide Permit Application for 10 structures will be submitted to the Corps in September 2008. Construction would not occur until approval is received.

(NP) = Not Present
(NI) = Resource/Use Present but Not Impacted
(PI) = Potentially Impacted and Brought Forward for Analysis.

NP NI PI	Discipline/Name	Date Review Comp.	Initials	**Review Comments** (required for Critical Element NIs, and for elements that require a finding but are not carried forward for analysis.)
CRITICAL ELEMENTS				
NI	Air Quality **Belcher**	7/28/08	PB	The project would not impact air quality.
NI	Areas of Critical Environmental Concern **J. Stout**	9/11/08	JS	The Kremmling Ammonite Site ACEC is just to the west of the project area. Thus, there would be no impacts.
NP	Cultural Resources **Wyatt**	7/15/08	BBW	A cultural resource inventory (Report #CR-08-38) was conducted. The survey located no new cultural resource sites within the project area. Thus, the project would not impact historic properties.
NP	Environmental Justice **J. Stout**	9/11/08	JS	According to the most recent Census Bureau statistics (2000), there are no minority or low income communities within the Kremmling Planning Area.
NP	Farmlands, Prime and Unique **Belcher**	7/28/08	PB	There are no farmlands, prime or unique, in the proximity of the proposed project area.
NP	Floodplains **Belcher**	7/28/08	PB	The project is located on a very small stream and not within a designated floodplain. There would be no impact to a floodplain by the project.
PI	Invasive, Non-native Species **Johnson**	6/16/08	RJ	See analysis in EA.

PI	Migratory Birds **McGuire**	7/15/08	MM	See analysis
NP	Native American Religious Concerns **Wyatt**	7/15/08	BBW	To date, no Native American Tribe has identified any area of traditional concern.
PI	T/E, and Sensitive Species (Finding on Standard 4) **McGuire**	7/15/08	MM	See analysis in EA.
NP	Wastes, Hazardous and Solid **Hodgson**	7/11/08	KH	There are no quantities of wastes, hazardous or solid, located on BLM-administered lands in the proposed project area, and there would be no wastes generated as a result of the Proposed Action or No Action alternative.
NI	Water Quality, Surface and Ground (Finding on Standard 5) **Belcher**	7/28/08	PB	Finding: The Proposed Action would not impact water quality. The minor disturbance during construction would not persist, and the amount disturbed is very small.
NI	Wetlands & Riparian Zones (Finding on Standard 2) **Belcher**	7/28/08	PB	Finding: The in-channel structures would not impact the riparian zone. During construction, only a small temporary disturbance would occur when the structures are keyed into the bank. See Hydrology Section.
NP	Wild and Scenic Rivers **Sterin**	6/20/08	BS	There are no eligible Wild and Scenic River segments in the proposed project area.
NP	Wilderness **Sterin**	6/20/08	BS	There is no designated Wilderness or Wilderness Study Areas in the proximity of the proposed project area.
NON-CRITICAL ELEMENTS (A finding must be made for these elements)				
NI	Soils (Finding on Standard 1) **Belcher**	7/28/08	PB	Finding: The small trenches would be hand constructed and represent a very small soil disturbance during construction. See Hydrology Section.
PI	Vegetation (Finding on Standard 3) **Johnson**	6/16/08	RJ	See analysis in EA.
PI	Wildlife, Aquatic (Finding on Standard 3) **McGuire**	7/15/08	MM	See analysis in EA.
PI	Wildlife, Terrestrial (Finding on Standard 3) **McGuire**	7/15/08	MM	See analysis in EA.
OTHER NON-CRITICAL ELEMENTS				
NI	Access/Transportation **Monkouski**	7/2/08	JJM	No Impacts.
NI	Fire **Wyatt**	7/15/08	BBW	No impacts.
NI	Forest Management **Belcher**	6/19/08	KB	Some narrow leaf cottonwood, aspen and thin leaf alder present in riparian. No impacts to forestry resource.
NI	Geology and Minerals **Hodgson**	7/11/08	KH	No impacts.
PI	Hydrology/Water Rights **Belcher**	09/11/08	PB	See analysis in EA.
NP	Paleontology **Rupp**	6/11/08	FGR	The general project area is geologically mapped as the Pierre Shale, a formation well known for producing significant invertebraete fossils. The Kremmling Ammonite Site ACEC is just to the west of the current project, and numerous fossil localities have been recorded in the immediate vicinity, however, the areas within and immediately adjacent the Creek consist of recent alluviums, but no bedrock in-situ fossils.
NI	Noise **Monkouski**	7/2/08	JJM	No impacts. There would be an increase in noise during construction but it would be temporary and short term.

NP	Range Management **Johnson**	6/16/08	RJ	No livestock grazing is authorized within the project area.
NP	Lands/ Realty Authorizations **Cassel**	6/11/08	SC	There are no leases, permits, or rights-of-way in the location of the proposed action.
NI	Recreation **Monkouski**	7/2/08	JJM	No Impacts.
NI	Socio-Economics **J. Stout**	9/11/08	JS	There would be no impacts.
NI	Visual Resources **Hodgson**	7/11/08	KH	No impacts.
PI	Cumulative Impact Summary **J. Stout**	9/11/08	JS	See analysis in EA.
FINAL REVIEW				
	P&E Coordinator **J. Stout**	9/11/08	JS	
	Field Manager **D. Stout**			